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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,412	01/05/2001	Sylvia Allegro	33234	5228

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EXAMINER

CHAWAN, VIJAY B

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 02/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/755,412

Applicant(s)

ALLEGRO ET AL.

Examiner

Vijay B. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 9-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claims 9-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 11.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05.
Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37

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CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A
"Sequence Listing" is required on paper if the application discloses a
nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and
if the required "Sequence Listing" is not submitted as an electronic
document on compact disc).

3. The disclosure is objected to because of the following informalities: the disclosure does not have any headings to differentiate between different parts of the specification, such as, Background, Brief Description of Drawings, ...etc.

Appropriate correction is required.

Claim Objections

4. Claims 4, 5, 6 are objected to because of the following informalities:

- Claim 4: it is not clear what the Applicant means by the terms "...
any other suitable features are identified in addition to the auditory

features." What are any other suitable features and how is the suitability determined ?

- Claim 5: it is not clear what the Applicant means by the terms "the auditory or any other features". What are any other features ?
- Claim 6: it is not clear what the Applicant means by the terms "... based upon additional information or hypotheses relative to the signal content and providing an adaptation...". What are the additional features and how are they related to the signal ?

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 - 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Rahim (EP 0 881 625 A2).

As per claim 1, Rahim teaches a method for recognizing vocal features in an acoustic signal comprising the steps of:

extracting, during an extraction phase, characteristic features from an acoustic signal captured by at least one microphone (Figure 1, items 10, 14);

processing, during an identification phase and with the aid of Hidden Markov Models, said characteristic features for the determination of a momentary acoustic scene or of sounds and/or for voice and word recognition (Col.6, lines 26-45).

As per claim 2, Rahim teaches the method of claim 1, wherein for the identification of the characteristic features during the extraction phase, Audity Scene Analysis (ASA) techniques are employed (Col.6, lines 26-52).

As per claim 3, Rahim teaches the method of claim 1, wherein at least one of the following auditory characteristics are identified during the extraction of said characteristic features: loudness, spectral pattern, harmonic structure, common on and offsets, coherent amplitude modulations, coherent frequency modulations, coherent frequency transitions and binaural effects (Col.6, lines 26-52).

As per claim 4, Rahim teaches the method of claim 1, wherein any other suitable features are identified in addition to the auditory features (Col.6, lines 26-52).

As per claim 5, Rahim teaches the method of claim 1, wherein to create auditory objects, and any other features are grouped along the principles of Gestalt theory (Col.7, lines 39-55).

As per claim 6, Rahim teaches the method of claim 5, wherein the extraction of characteristics and/or grouping of the characteristics are/is performed either in

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context-free or in context-based fashion in the sense of human auditory perception, based upon additional information or hypotheses relative to the signal content and providing an adaptation to the respective acoustic scene (Col.7, lines 8-21).

As per claim 7, Rahim teaches the method of claim 1, wherein during the identification phase, data is accessed which was acquired in an off-line training phase (Col.3, line 27 – Col.4, line 1).

As per claim 8, Rahim teaches the method of claim 1, wherein the extraction phase takes place in continuous fashion, or at regular or irregular time intervals (Col.8, lines 20-42).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagata (6,009,396) teaches method and system for microphone array input type speech recognition using band-pass power distribution for sound source position/direction estimation.

Brennan et al., (6,240,192) teach an apparatus for and method of filtering in an digital hearing aid, including an application specific integrated circuit and a programmable digital signal processor.

Zingher (6,092,039) teaches a symbiotic automatic speech recognition and vocoder.

Bahl et al., (4,759,068) teach construction Markov Models of words from multiple utterances.

Fang et al., (6,480,610) teach subband acoustic feedback cancellation in hearing aids.

Hollier et al., (5,848,384) teach analysis of audio quality using speech recognition and synthesis.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vijay B. Chawan whose telephone number is (703) 305-3836. The examiner can normally be reached on Monday Through Thursday 7-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Vijay B. Chawan 2/13/03
Vijay B. Chawan
Primary Examiner
Art Unit 2654

vbc
February 13, 2003

VIJAY CHAWAN
PRIMARY EXAMINER